

applying a biological sample comprising cells containing nucleic acid to a biochemically inert filter positioned between a first location and a second location in a conduit;

retaining the sample on the filter for sufficient time to permit extraction of nucleic acid onto the filter;

applying a wash fluid through the conduit, whereby said wash fluid substantially removes from the filter matter capable of interfering with a nucleic acid amplification reaction, while substantially retaining the extracted nucleic acid on the filter; and

applying an aqueous solution to the filter at a temperature above about 75° C. to elute the extracted nucleic acid from the filter.

55. The method of claim **54**, wherein at least a portion of the filter is impregnated with a mixture comprising a chaotropic salt, a weak basic buffer, and a chelating agent.

56. The method of claim **54**, wherein at least a portion of the filter is impregnated with a strong base.

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